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INFO RHMFISS/DEPT OF ENERGY WASHINGTON DC
RUEHCG/AMCONSUL CHENNAI 1010
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RUEHNEH/AMCONSUL HYDERABAD 0076
RUEHNE/AMEMBASSY NEW DELHI 2388
RUEHCI/AMCONSUL KOLKATA 3114

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SENSITIVE
SIPDIS

DEPT FOR OES/STC, SCA/INSB, VO/L/C, EEB/ESC

E.O. 12958: N/A

TAGS: [TPHY](#) [TRGY](#) [TSPL](#) [CVIS](#) [ECON](#) [IN](#)

SUBJECT: KOLKATA'S VARIABLE ENERGY CYCLOTRON CENTER SEEKS ACCELERATED
U.S.-INDIA SCIENTIFIC COLLABORATION

¶1. (SBU) Summary: The Variable Energy Cyclotron Center (VECC) in Kolkata, a premier institute of the Government of India's Department of Atomic Energy, commissioned India's first superconducting cyclotron in May 2009. In a September 16 meeting with PolOFF, VECC's Director, Dr. Rakesh K. Bhandari, discussed past, and enthused about future, collaboration with U.S. educational institutions, particularly in light of the U.S.-India civilian nuclear deal. He noted the center's continued difficulties with procurement and travel, despite the recently concluded U.S.-India civilian nuclear deal. He emphasized the growing strategic importance of helium, its usefulness in predicting natural disasters and intention to domestic source the element.

Existing Collaboration with U.S. Institutions

¶2. (SBU) The Variable Energy Cyclotron Center (VECC) was established in 1977 as a premier research institute working in the field of advanced accelerator technology development for basic and applied research. The center is part of the Government of India's Department of Atomic Energy. VECC built the first large cyclotron in India, and in May 2009 commissioned the first superconducting cyclotron in the country, both according to plans received from Texas A&M and Michigan State universities. Research utilizing the new superconducting cyclotron will begin by September 2010. In addition to the two educational institutions named, VECC also works closely with Brookhaven Laboratory in New York and the Department of Energy's Fermilab in Chicago.

Continued Difficulties with Procurement and Visas

¶3. (SBU) Bhandari noted the center's continued difficulties with procurement and travel, despite the recently concluded U.S.-India civilian nuclear deal. VECC prefers to source critical components from the U.S., given the cyclotron's U.S. design. However, according to him, U.S. suppliers continue to face export restrictions in this area. VECC recently purchased equipment from Ion Beam Applications in Belgium to manufacture radio-isotopes for nuclear medicine diagnostics as it was unable to locate a U.S. supplier. According to him, each year a dozen VECC scientists travel to the US for conferences and meetings, with an equal number of U.S. scientists paying reciprocal visits. He expressed concern about the inordinate

delays with U.S. visa issuance for Indian scientists.

Domestic Sourcing of the Strategic Element Helium

¶4. (SBU) Bhandari predicted an increasing worldwide demand for Helium as an important element for the application of cryogenics technology research. VECC currently imports liquid helium from the U.S. and Russia, however, is looking for domestic sources either from hot springs or natural gas wells. In southern India, VECC has partnered with a U.S.-based scientist to separate helium from natural gas. VECC also plans to establish a helium separation laboratory in the Bakreshwar hot springs, about 230 kilometers northwest of Kolkata. One of the benefits of the lab has been the observation of a positive correlation between an increase in helium concentration and earthquakes. For instance, before the December 2004 South Asian tsunami, the center noted unusual increases in helium concentration.

Comment

¶5. (SBU) Director Bhandari was friendly, yet measured, in the center's first interaction with post in several years. While relaxed export and visa restrictions may not have been part of the U.S.-India civilian nuclear deal, scientists at the VECC had hoped that they would be accompanying measures. What struck

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post's PolOFF, no scientist himself, was the amount of U.S.-India collaboration, whether at the institutional or individual level, that had already gone into VECC's work. The center is open to further collaboration and would welcome the opportunity to engage with scientists in the field.
PAYNE